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ABSTRACT

Activities to help the young child improve his/her physical fitness are difficult to find because of insufficient research supporting the effectiveness of proposed activities. However, several activities are assumed to improve the fitness of various areas of the body while concurrently improving cardiovascular endurance by increasing the heart rate for a definite period of time. Probably the best single activity for cardiovascular endurance is jogging at progressively longer distances and time periods. Muscular endurance is obtained through repetitive exercise of selected muscle groups. Arm and shoulder girdle strength and endurance seems to be a traditionally weak area. To increase strength in this area, exercises are needed that will get the children down on the floor supporting their bodies with their arms. The crab walk and sprinting are good activities for leg development. Another area of particular weakness in young children is the abdomen. Kindergarten children have a difficult time finding their stomach muscles and consequently have trouble doing situps. The easiest thing is to start with leg raises while hanging from a bar, or the V-sit and curl-ups. These are just a few activities that increase overall as well as cardiovascular fitness, but they give a general idea of exercise patterns that effectively increase physical fitness in children. The overall progression in children of any age can be aided through the presentation of challenge questions. (DMT)

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SELECTED ACTIVITIES TO IMPROVE CARDIOVASCULAR ENDURANCE AND STRENGTH AND MUSCULAR ENDURANCE

K-3

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Activities to help the young child to improve his/her physical fitness are difficult to find. One reason for this difficulty is the lack of sufficient research which will back up the activities and show that they actually do improve what they propose to. Because of this lack of research, we can do best to assume that the following suggestions will provide the repetition that is needed to improve cardiovascular endurance and strength and muscular endurance.

CARDIOVASCULAR ENDURANCE

We know that to actually improve cardiovascular endurance, or heart fitness as my little ones say, the heart rate must be raised for a definite period of time. It is very difficult, in the public school situation, to varify whether this has been accomplished. We must assume, because we do not have the appropriate equipment, that by keeping the students constantly in rapid motion, this end can be reached. All of the following activities are designed to utilize a minimum amount of equipment or equipment that can be acquired easily. The activities

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can accomodate any number of children and in most instances, a limited amount of space.

Probably the best single activity for cardiovascular endurance would be jogging. You do not necessarily need a track.(slide) Any playground will do (as long as it is large enough that the children won't get dizzy going around it). The kindergarten and first grade child needs to be taught how to jog. Running, of course, comes very naturally to this age.(slide) But learning to pace themselves takes some hard work. The distances and times that the younger child is asked to jog should be progressively longer. One way to begin this progression might be with challenges presented by the teacher to the entire class. By using this method, each child gets the opportunity to move the entire class time without waiting in line.

The following questions should be asked one right after the other. Try to keep the children moving as long as possible with each question. This lesson took fifteen minutes to complete. (slide)Prior to the lesson, tires were placed randomly on the ground around the playground. (slide) The children were asked first to go and sit on one of the tires. Then I asked these questions:

1) (slide) Can you keep running around the tires without touching each other or the tires until I say the "stop"?

Repeat the same question again and remind the children not to touch each other. This avoids many accidents. It also helps to get them warmed up to the running.

If they are a bit sluggish as a group you might need to even ask it a third time to try and create a little more excitement. (slide)

2) (slide) Can you run and jump over a tire every time you come to a free tire? (slide)

3) (slide) Show me a different way to jump over a tire as you run around. (slide)

4) (slide) Can you find a way to put one foot in each tire as you run around? (slide)

5) (slide) Can you get both feet in a tire this time?

6) (slide) Can you show me a way to run around and jump on to a tire and then off of the tire?

7) (slide) This time as you jump off your tires can you do something in the air?

8) Can you run on top of the tires as you go around the area? (slide)

9) (slide) Show me a way to run around the top of each tire as you come to it.

10) (slide) How fast can you move around and not touch any of the tires?

11) (slide) How fast can you run and step on top of the tires as you go around?

12) (slide) Can you run up to a tire and find a way to roll over it and then keep on going to the next tire?

13) (slide) Show me something else you can do over the tires as you run around.

14) (slide) Can you try and touch every tire before I say "stop"?

15) (slide) Can you touch every tire with both feet before I say the word "stop"?

By the second and third grade, if jogging has been emphasized, the children are ready for much harder work. Rather than just asking the children to jog around a track, try different motivational techniques. This year, in tune with most current themes, we had a bicentennial run through 200 years. (slide) The whole class tries to run as far as possible in twelve minutes. (slide) The children have a tendency to forget their goal if much more than twelve to fifteen minutes is given. We were running on a track. To count the laps each child was given a rock every time he/she completed a lap. (slide) The rocks were turned in at the end of the time period. Totals were kept for each class and recorded on a chart by the classrooms. (slide) By the end of the month long period the children, with very few exceptions, were running a mile in twelve minutes and almost half were running 1¼ to 1½ miles. All of the 200 children showed improvement. (slide)

Jogging is one of the best activities to improve c. v. endurance, but any activity to keep the children moving will work if you can keep them moving long enough. Unfortunately, many physical educators appear to beleive that short periods of play activities will provide for this aspect of fitness which is contrary to the research literature. Another activity might be to make up a simple hop, jump, dance routine that lasts for at least five

minutes. (slide) The second and third graders would be able to handle some simple jump rope routines. (slide) Let them help make up the steps to use. Aerobic dance routines and the rhythmic movements of Joan Sullivan can be done with the youngest of children as well as the older child.

STRENGTH AND MUSCULAR ENDURANCE

Strength and muscular endurance is specific to muscle groups. Muscular endurance is obtained through repititious exercise of the selected muscle groups. The rate and repetition of the exercise must be increased if muscular endurance is to be increased. Again the first suggestion will be given with a full lesson of challenge questions. Most activities presented in this section can be worked into challenge questions or can be used in a movement education format. This is suggested again because of the benefits that each child recieves from this type of lesson.

Arm and Shoulder Girdle

Arm and shoulder girdle strength and endurance seems to be a traditionally weak area. For arm and shoulder girdle strength the idea is to get the kids on the floor supporting their body with their arms. On way to do this is to have the children get into push up position and then challenge them with these questions: (slide)

1) (slide) Can you look up?

2) (slide) Can you look down?

3) (slide) Move your head all around?

4) (slide) Can you lift up one of your legs?

5) (slide) The other one?

6) (slide) Can you lift up one of your arms? (slide) The other one?

7) (slide) Can you move your feet away from each other and then back together?

8) (slide) Can you do the same with your hands?

9) (slide) Can you touch you head with one hand? Can you touch your nose? top of your head? chin? ear? (other parts of the body)

10) (slide) Can you turn over and face the sky?

11) (slide) Show me how to turn back over.

12) (slide) Can you touch your knees to the ground?

13) (slide) Now see if you can go down and touch your nose to the ground?

14) (slide) Can you walk with your hands and make your feet drag behind you?

15) (slide) Can you clap your hands while you stay in this position?

16) (slide) Can you clap your feet?

As you can see, all of these activities get progressively harder. You may initally have to limit the activities to only the first few especially with kindergarten children and then gradually work up to being able

to do all of the activities one right after the other. After all can be accomplished then the time could be increased for each individual activity.

There are many interesting activities that can help improve arm strength. (slide) For instance, any climbing activity that requires pulling with the arms will help. This can be accomplished in any number of ways. Building equipment that allows climbing or taking advantage of things that might already be on the school grounds such as poles or trees. (slides)

Rope climbing is very beneficial to the arms and shoulders. (slide) Again, any number of methods can be used. Try to avoid waiting in line by setting up stations for everyone to move to. (slide) Or maybe set up an obstacle course in which rope climbing is one part.

Any time the child has to use the arms to propel the body weight over something, strength is likely to be improved. (slide) Vaulting over anything, then, would be a good activity to incorporate into a lesson.

The horizontal ladder is a piece of equipment that research has shown to prove significant in the building of arm strength and endurance. (slide) This might be part of your obstacle or challenge course. (slide) Even if the child can not get across it all the way, just hanging on it will help. (slide)

Doing different activities or posing different challenges while the child is supporting himself on his arms with his feet in the air against the wall is another suggestion. (slide) Ask questions similar to those given for push-up position. The only limit is your imagination and that of the children's. (slide) Don't hesitate to ask for suggestions from the children. They will come up with many good ones.

If the children could push something that was relatively heavy, strength could be developed. (slide) Rather than lifting weights, get some tires and have them push them back and forth. Tires are easy to get; usually they will be donated, and can be used for so many things. Weight can be added inside the tires to increase the resistance.

(slide) The parachute is a wonderful piece of equipment. Doing anything with it gives the entire upper trunk a work out. The whole group can participate at one time and this helps the children learn to work together. There are many books which give parachute suggestions. Some are: Making waves (slide), popping popcorn (slide), and making a mushroom (slide). The children thoroughly enjoy this activity.

Leg Strength and Muscular Endurance

Some of the activities which have already been suggested will also help the legs. The first cardio-

vascular routine has the children jumping over tires. This, or any jumping activity which uses the legs to propel the body through the air will increase strength. (slide) Put a shark in a sand pit and see if the children can make it over the pit without getting eaten by the shark. (let them name their shark)

Sink some tires in the ground and let the kids find different ways to jump over them (slide). Have the children hold the tires for each other and let them try the same thing (slide).

As long as you have the tires right there, let them lift them with their legs. (slide) Ask them if they can get the tires to go up and down in a pumping motion with their legs.

The crab walk position, as well as working with arm strength and endurance, will aid the legs in the same fashion. (slide) Going sideways, backwards, and forwards are variations of this one activity, Can you move around on four body parts with your stomach in the air? This question will usually get the crab walk response.

We do what the kids named the chair relay.(slide) They run to the first chair of a row of chairs in front of them and sit down in it. Then they quickly move on to the next, and so on. (slide) The number of chairs can be increased as strength and endurance increases.

Some good partner stunts are: 1) the see-saw-knee bends where the partners face each other and hold hands. One goes down to a half knee bend, then the other does one(slide), 2) Have the partners try to push each other's legs from a prone position(slide), 3) try the chinese get up where partners lock elbows with backs to each other and try to stand(slide).

Sprinting is another good activity for leg development. (slide) The small child can handle the 50 yard and even the 75 yard dash. They love to run at this age whether it is against someone or on their own so this does not have to be a competitive event. Just pick a spot on the playground and ask them how fast they can run to that spot. (slide)

(slide) Whenever the children climb, they not only help arms and shoulders but frenquently legs because they are having to push the body weight upward. Find something that the children can climb up. (slide) This is called our tire wall but you can find anything that is available as long as it is safe (slide). Maybe a tire bridge(slide).

Abdominal Strength and Endurance

The kindergarten child has a very difficult time finding his stomach muscles and when asked to do a sit up it is rare to find one that can. (slide)

First through third grade can handle the sit up and it is a very good activity for improving abdominals. Remember that sit ups should always be done with the knees bent to insure that the abdominals are working.

The kindergarten child will need to be started with other activities that he can do. These activities can also be used with the other three grades, of course (slide). The easiest thing to start with is probably leg raises while hanging from a bar. Have them bring their legs up with their knees bent and then try with the legs straight. Anytime the child is hanging from the bar and brings his legs up to do something it is improving the abdominals. (slide) Ask them if they can bring their legs up to the bar and hook their knees over the bar. Then see if they can let go of the bar with their hands and swing down and back up. (slide) This inverted sit up is wonderful for abdominal strength.

So are the V-sit, and the curl-ups which are variations of the sit up.(slide) Increase the number of repetitions to increase endurance.

The type of motion where the child is bringing both legs up to go over something is working the abdominal muscles.(slide) Jump over tires by bringing the legs up or swing over something that requires the legs to be raised into the air.(slide) The later also helps the arms.

The first push up position lesson for arm strength would also be valuable for abdominal strength if the back is kept straight.(slide) If you have ever held the push up position very long you realise very quickly that your abdominals do play a role in keeping you in that position.

These are just a few abdominal activities. (slide) But remember-any time you bring the legs toward the body or the body toward the legs you are contracting the abdominal muscles.

(slide) I hope that some of the activities suggested here this morning were new to you. If you haven't already, try using the challenge questions. My children seem to have a lot of fun being challenged and if we can include physical fitness activities within many other movements and with a certain amount of fun then think of how much better it will be for the children!!!